

WHAT IS CLAIMED IS:

1. A printing system, comprising:
 - a media transport assembly adapted to route media through the printing system;
 - a carriage assembly adapted to hold a printhead and traverse the media;
 - a service station assembly adapted to service the printhead;
 - a motor adapted to drive the media transport assembly and the service station assembly; and
 - a power transmission arrangement operatively coupling the motor with the service station assembly,
 - wherein the carriage assembly is adapted to actuate the power transmission arrangement to selectively couple the motor with the service station assembly.
2. The printing system of claim 1, wherein the power transmission arrangement includes:
 - a drive shaft;
 - a drive gear mounted on the drive shaft;
 - a shift plate supported by the drive shaft and rotatable between a first position and a second position;
 - an idler gear supported by the shift plate and engaged with the drive gear;
 - and
 - a pinion gear supported by the shift plate and movable between a disengaged position and an engaged position with the idler gear when the shift plate is rotated between the first position and the second position.
3. The printing system of claim 2, wherein the carriage assembly is adapted to rotate the shift plate of the power transmission arrangement between the first position and the second position.

4. The printing system of claim 1, wherein the carriage assembly is adapted to traverse the media in a first direction and rotate a portion of the power transmission arrangement in a second direction substantially perpendicular to the first direction to selectively couple the motor with the service station assembly.

5. The printing system of claim 4, wherein the motor is adapted to move a portion of the service station assembly in the second direction.

6. A method of operating a printing system including a printhead, the method comprising:

routing media through the printing system via a media transport assembly;

traversing the media with the printhead via a carriage assembly;
servicing the printhead via a service station assembly;

and

driving the media transport assembly and the service station assembly with a motor, including actuating a power transmission arrangement by the carriage assembly to selectively couple the motor with the service station assembly.

7. The method of claim 6, wherein the power transmission arrangement includes:

a drive shaft;

a drive gear mounted on the drive shaft;

a shift plate supported by the drive shaft and rotatable between a first position and a second position;

an idler gear supported by the shift plate and engaged with the drive gear;
and

a pinion gear supported by the shift plate and movable between a disengaged position and an engaged position with the idler gear when the shift plate is rotated between the first position and the second position.

8. The method of claim 7, wherein actuating the power transmission arrangement includes rotating the shift plate of the power transmission arrangement between the first position and the second position with the carriage assembly.
9. The method of claim 6, wherein traversing the media includes moving the printhead in a first direction via the carriage assembly and wherein actuating the power transmission arrangement includes rotating a portion of the power transmission arrangement in a second direction substantially perpendicular to the first direction via the carriage assembly.
10. The method of claim 9, wherein driving the media transport assembly and the service station assembly includes moving a portion of the service station assembly in the second direction with the motor.
11. A power transmission arrangement, comprising:
 - a shaft;
 - a first gear mounted on the shaft;
 - a plate supported by the shaft and rotatable between a first position and a second position;
 - a second gear supported by the plate and engaged with the first gear; and
 - a third gear supported by the plate and movable between a disengaged position and an engaged position with the second gear when the plate is rotated between the first position and the second position.
12. The power transmission arrangement of claim 11, wherein the first gear is adapted to drive the third gear via the second gear when the plate is in the second position.
13. The power transmission arrangement of claim 11, wherein the plate is rotatable between the first position and the second position about an axis of the shaft.

14. The power transmission arrangement of claim 11, wherein the plate includes a cam feature adapted to move the third gear between the disengaged position and the engaged position when the plate is rotated between the first position and the second position.

15. The power transmission arrangement of claim 14, wherein the cam feature includes a first cam surface and a second cam surface, wherein the third gear is supported by the first cam surface when in the disengaged position and the second cam surface when in the engaged position.

16. The power transmission arrangement of claim 15, wherein the first cam surface and the second cam surface are formed on an arm of the plate.

17. The power transmission arrangement of claim 11, further comprising:
a spring coupled to the plate, wherein the spring is adapted to bias the plate to the first position.

18. The power transmission arrangement of claim 11, wherein the plate includes a stop adapted to limit rotation of the plate and establish the first position thereof.

19. A power transmission arrangement for transmitting power from a drive shaft, comprising:

a drive gear driven by the drive shaft;

an idler gear engaging the drive gear;

a pinion gear selectively engaging the idler gear; and

a shift plate supported by the drive shaft and supporting the idler gear and the pinion gear,

wherein rotating the shift plate selectively engages the pinion gear with the idler gear.

20. The power transmission arrangement of claim 19, wherein selectively engaging the pinion gear with the idler gear includes driving the pinion gear with the drive gear via the idler gear.
21. The power transmission arrangement of claim 19, wherein the drive shaft is rotatable about an axis, and wherein rotating the shift plate includes rotating the shift plate about the axis of the drive shaft.
22. The power transmission arrangement of claim 19, wherein the shift plate includes a cam feature supporting the pinion gear, and wherein rotating the shift plate includes moving the pinion gear with the cam feature to selectively engage the pinion gear with the idler gear.
23. The power transmission arrangement of claim 22, wherein the cam feature includes a first cam surface and a second cam surface, and wherein moving the pinion gear with the cam feature includes moving the pinion gear along the first cam surface and the second cam surface.
24. The power transmission arrangement of claim 19, wherein rotating the shift plate includes overcoming a biasing force on the shift plate.
25. A power transmission arrangement, comprising:
 - a drive shaft;
 - a drive gear mounted on the drive shaft;
 - a shift plate supported by the drive shaft and rotatable between a first position and a second position;
 - an idler gear supported by the shift plate and engaged with the drive gear;
 - a pinion gear supported by the shift plate; and
 - means for selectively engaging and disengaging the pinion gear with the idler gear when the shift plate is rotated between the first position and the second position.

26. The power transmission arrangement of claim 25, further comprising:
means for rotating the shift plate between the first position and the
second position about an axis of the drive shaft.
27. The power transmission arrangement of claim 25, wherein means for
selectively engaging and disengaging the pinion gear with the idler gear includes
means for moving the pinion gear between a disengaged position and an engaged
position with the idler gear.
28. The power transmission arrangement of claim 25, further comprising:
means for biasing the shift plate to the first position.
29. The power transmission arrangement of claim 25, further comprising:
means for limiting rotation of the shift plate.
30. A power transmission arrangement, comprising:
a drive shaft;
a drive gear mounted on the drive shaft;
a shift plate supported by the drive shaft and rotatable between a first
position and a second position, the shift plate including a first cam surface and a
second cam surface;
an idler gear supported by the shift plate and engaged with the drive gear;
and
a pinion gear supported by the shift plate and movable between a
disengaged position and an engaged position with the idler gear, wherein the
pinion gear is supported by the first cam surface when in the disengaged position
and the second cam surface when in the engaged position.
31. The power transmission arrangement of claim 30, wherein the pinion
gear is driven by the drive gear via the idler gear when in the engaged position.

32. The power transmission arrangement of claim 30, wherein the shift plate is rotatable between the first position and the second position about an axis of the drive shaft.
33. The power transmission arrangement of claim 30, wherein the first cam surface and the second cam surface are formed on an arm of the shift plate.
34. The power transmission arrangement of claim 30, further comprising:
a spring coupled to the shift plate and adapted to bias the shift plate to the first position.
35. The power transmission arrangement of claim 30, wherein the shift plate includes a stop adapted to limit rotation of the shift plate and establish the first position thereof.